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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/086,921	03/01/2002	Edward Bulgajewski	12362-60	3269

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EXAMINER

PAIK, SANG YEOP

ART UNIT

PAPER NUMBER

3742

DATE MAILED: 05/21/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/086,921

Applicant(s)

BULGAJEWSKI ET AL.

Examiner

Sang Y Paik

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 and 20-23 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-18 and 20-23 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>2</u> . | 6) <input type="checkbox"/> Other: |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 3, 4, 6-20, 22 and 23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 3, 6 and 22, it is unclear what zone or portion defines a common termination zone.

In claims 8-14, it is recited that a more positive first voltage and a less positive second voltage is directed. However, there is only one voltage source, it is unclear how such first voltage and second voltage are created.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-3, 6 and 7 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Shafe et al (US 5,181,006).
5. Claims 1, 5-7 and 21-23 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Armbruster Jr (US 3,287,684).

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6. Claims 1-3, 5-7 and 21-23 are rejected under 35 U.S.C. 102(b) as being anticipated by Batliwalla et al (US 4,777,351).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 8-14, 17, 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Batliwalla et al (US 4,711,351) in view of Nishino et al (US 5,004,895) or Rimmi (US 3,892,946).

Batliwalla et al anticipates all the structure claimed including a substrate having a PTC conductive thermistor material, a first electrode and a second electrode each having a section that contains interdigitated electrodes protruding therefrom and an adjacent section that is devoid of interdigitated electrodes next to the section having an interdigitated electrode; Batliwalla et al also shows a third electrode. Batliwalla et al also shows that the spacing between a first portion of the first and second electrode, which can be a space between the outer strips of the electrodes, is greater than a spacing between a second portion of the first and second electrodes, which can be a space between the one of the interdigitated portion of the electrode and the outer strip of the other electrode. Batliwalla et al shows that the second electrode has a wider electrode section shown by the longer interdigitated sections than the first and second electrodes.

However, Batliwalla et al does not show a voltage source with a switch means such as a multi-pole, multi-position switch to provide for a multiple heating.

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Nishino et al shows a heating apparatus having a multiple electrodes connected to an electrically conductive layer to provide for a multiple heating zones with a switch means that provide for a multi-pole, multi-position switch. Rimmi also discloses a multi-pole switch to operate a heating device having a multiple heating sections to control each of the heating sections.

In view of Nishino et al or Rimmi, it would have been obvious to one of ordinary skill in the art to adapt Batliwalla et al with a multi-pole switch to control heating device having a multiple heating sections defined by the plurality of electrodes and create different heating profile.

9. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Batliwalla et al in view of Nishino et al or Rimmi as applied to claim 8 above, and further in view of Shafe et al (US 5,181,006).

Batliwalla et al in view of Nishino et al or Rimmi discloses all the structure claimed except the electrodes being formed in a serpentine pattern.

Shafe et al shows the electrodes being formed of a serpentine pattern. In view of Shafe et al, it would have been obvious to one of ordinary skill in the art to adapt Batliwalla et al, as modified by Nishino et al or Rimmi, with the electrodes in the serpentine pattern to define more heating sections in a given space by such pattern to increase the overall conductivity of the heating device.

10. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Batliwalla et al in view of Nishino et al or Rimmi as applied to claim 8 above, and further in view of Armbruster Jr (US 3,287,684) and Shafe et al (US 5,181,006).

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Batliwalla et al discloses all the structure claimed except the substrate is made of a fabric which is coated with the PTC material.

Armbruster shows a heating device comprising a flexible substrate such as a cloth upon which a heating material is coated thereon. Shafe et al teaches that a PTC film is coated on a rigid or flexible substrate as the heating element for its heat self-regulating purposes.

In view of Armbruster and Shafe et al, it would have been obvious to one of ordinary skill in the art to adapt Batliwalla et al, as modified by Nishino et al or Rimmi, with a flexible substrate such as a fabric material with a PTC film coated thereon for heat self-regulating purposes as well as having a flexible substrate so that the heating device can be used for heating various shape and sizes.

Allowable Subject Matter

11. Claim 16 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kiyokawa et al (US 4,055,526) and Ellis et al (US 4,250,398).

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sang Y Paik whose telephone number is 703-308-1147. The examiner can normally be reached on M-F (8:00-5:30) First Friday Off.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Teresa Walberg can be reached on 703-308-1327. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-3463 for regular communications and 703-305-3463 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0861.

S. P. L.

Sang Y Paik
Primary Examiner
Art Unit 3742

syp
May 19, 2002